## CONFIDENTIAL 1 April 1954

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| ME   | MEMORANDUM FOR: CHIEF, GENERAL PHYSICS BRANCH   |              |   |          |            |           |  |  |  |
|--|---|--------------|---|----------|------------|-----------|--|--|--|
| su   | BJECT:  |              | for<br>I.R. Communicati<br>ized Receivers a | lon Syst |            |           |  |  |  |
| ъe   | e present diff  | liculties at | vers the propose  It i el for its consi     | ls hoped | that this  | plan will |  |  |  |
| ha<br>fa<br>da<br>the<br>fo:<br>wo<br>in<br>P-:<br>wi<br>fr<br>an<br>de: | has suffered for two outstanding reasons.  First, there is the problem of lack of cleared personnel. This lack has arisen from the inability of to hold their employees, from failure of to submit sufficient clearance requests at an early date, and from the usual three month clearance delay. Second, there is the problem of lack of planning. The original planning on Task I, P-101, for example, was so overly optimistic that even miraculous performance would look poor in comparison to the plan.  3. It is proposed that both of the above difficulties be corrected in the following manner. will be asked to replan the work on P-101 and P-115. These plans, which will preferably be made on paper with an APD representative present, should be complete project plans from the work load of each individual cleared to the scheduling of work and funds during each of the three phases. Realistic monetary and work deadlines should be set up at the end of each phase and within each phase if possible. The delay for clearance should be considered in the planning. |              |   |          |            |           |  |  |  |
| mi<br>fu   | 4. When planning the future work on P-115, it will be necessary to establish firm objectives. A suggested list of three sets of transmitters and receivers is given. These sets will be based on the same fundamental transmitter and receiver circuits and will differ only in input and output circuits.  |              |   |          |            |           |  |  |  |
| Se   | t No.   |              | Transmitter                                 |          | Receive    | er        |  |  |  |
| October  | Personal communications transceiver, 1000 yd. range under city conditions, capable of being concealed on person when in operation, eight hour operating life at 70°F - 100% receiving cycle - 12½% transmitting cycle, audio response 300 - 3000 cycles per second.   |              |   |          |            |           |  |  |  |
| NEXT REVIEW DA<br>AUTH: , HR 70-2  | 0<br>О ТО: ТЗ S <b>О</b> Д<br>ЛЕ: _   | <b>5/0</b>   | CONFIDE                                     | A        | <b>L</b> ' | Set No.   |  |  |  |

| Set No.  | Transmitter   | NTIAL  | Receiver  |               |  |  |  |  |  |
|--|---|--|---|---------------|--|--|--|--|--|
| 2  | Audio-surveillance transcircuit of Set #1 Transsufficient audio gain ppickup person speaking high or low impedance maudio compression to be terminals provided for switching, life at 70° be 6 months with 25% tr (power source probably container, choice of lipower). | mitter with<br>provided to<br>20 feet from<br>icrophone,<br>provided,<br>external<br>to 120°F to<br>ansmit cycles<br>in separate | Audio-surveillance receiver, circuit of Set #1 receiver, to be used for receiving and relay station work. |               |  |  |  |  |  |
| 3  | Radio switch transmitter, circuit of Set #1 transmitter provided with keyed audio frequency oscillator in- stead of voice amplifier.  Radio switch receiver, circuit of Set #1 re- ceiver with relay in output in place of phones                                       |  |   |               |  |  |  |  |  |
| 5. Before beginning the replanning of the P-101 and P-115 work, will be informed that failure to meet such deadlines as are  |   |  |   |               |  |  |  |  |  |
| agreed upon shall constitute sufficient reason for further action.  Further action will be explained to include formal complaints to  or termination of the contracts. In particular, days             |   |  |   |               |  |  |  |  |  |
| personnel to competitors will not be tolerated. During the plantage of   |   |  |   |               |  |  |  |  |  |
| and the importance of early requests for clearances will be stressed once again.   |   |  |   |               |  |  |  |  |  |
| 6. It is hoped that in the course of planning the projects both APD and will get a clarified picture of the various steps to be taken, the order in which they are to be taken, and the time required. |   |  |   |               |  |  |  |  |  |
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|  |   | TSS/APD  |   |               |  |  |  |  |  |
| 75.44 4 5  |   | TOO APD  |   |               |  |  |  |  |  |
| Distribution:<br>√Orig P-1<br>1 - P-115  |   |  |   |               |  |  |  |  |  |

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